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TECHNICAL SERIES NO. 12, PART I.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ENTOMOLOGY.
L. O. HOWARD, Entomologist and Chief of Bureau.

MISCELLANEOUS PAPERS.

CATALOGUE

OF

RECENTLY DESCRIBED COCCIDÆ.

By J. G. SANDERS, M. A.,
Assistant.

ISSUED JUNE 5, 1906.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1906.

SB
823
Q25

LETTER OF TRANSMITTAL.

U. S. Department of Agriculture,
Bureau of Entomology,
Washington, D. C., April 16, 1906.

Sir: I have the honor to transmit herewith the manuscript of a Catalogue of Recently Described Coccidæ (Scale Insects), prepared by Mr. J. G. Sanders, of this Bureau. Owing to the economic importance of this group of insects and the scientific interest attached thereto, I recommend that it be published as Technical Series No. 12, Part I, of the Bureau of Entomology.

Respectfully,

C. L. Marlatt,
Acting Chief of Bureau.

Hon. James Wilson,
Secretary of Agriculture.

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MISCELLANEOUS PAPERS.

CATALOGUE OF RECENTLY DESCRIBED COCCIDÆ.

By J. G. Sanders, M. A., *Assistant.*

Since the publication, in March, 1903, of Mrs. Fernald's Catalogue[a] many new genera, species, and varieties of Coccidæ from various regions have been described by enthusiastic entomologists. Nine genera, 6 subgenera, 137 species, and 22 varieties comprise the following catalogue, which is fairly complete to date. The majority of the references are to publications which have appeared since March, 1903; however, a few previous to this date are cited, which were overlooked by Mrs. Fernald in the stupendous task of preparing her most useful contribution to coccidology.

The Bureau of Entomology maintains a complete bibliography, by the card-index system, of all publications pertaining to Coccidæ, both economic and systematic. At the suggestion of Prof. T. D. A. Cockerell, and with his valuable assistance, the writer has prepared a supplementary catalogue of new species only, which he hopes to publish *annually* hereafter. In this work the writer respectfully begs the assistance of all authors by the sending of separates or notices of publication, and specimens, if possible, to this Bureau, where they will be properly cared for and recorded.

The large national collection of Coccidæ, containing 1,038 identified species, of which number 660 are types and cotypes—besides much unidentified material from Australia, India, China, and Japan—has been carefully arranged alphabetically in cases built especially for the purpose. Each specimen is carefully wrapped in lens paper and put into a small telescopic pasteboard box, 50 by 75 mm. and varying from 10 to 50 mm. in depth, properly labeled on the edge. Five rows of these boxes, card-index style, fill the regulation insect drawer; and, with the drawers labeled, but a moment is necessary to find any specimen desired. Locality cards, giving all known data for each specimen, are also filed in alphabetical order.

The writer once more begs the assistance of all workers on Coccidæ in publishing annually a complete bibliography of all new species and in the maintenance of a complete bibliographical card index of all publications relating to scale insects.

[a] Bul. 88, Hatch Exp. Sta., Mass. Agric. Coll. A Catalogue of the Coccidæ of the World. By Mrs. Maria E. Fernald.

Subfamily **MONOPHLEBINÆ.**

Monophlebus stebbingii mangiferæ Green.

Monophlebus stebbingii mangiferæ "Green," Stebbing, Jn. Linn. Soc. Lond., XXIX, p. 142 (1904).
Habitat—Lahore, India.
On Mango.

Monophlebulus townsendi Ckll.

Monophlebulus townsendi Ckll., Proc. Dav. Ac. Sci., X, p. 127 (1905).
Habitat—Philippine Islands.

Mimosicerya, new section of *Icerya*; Ckll., The Entom., XXXV, p. 233 (1902). Type, *hempeli.*

Icerya candida Ckll.

Icerya candida Ckll., Proc. Dav. Ac. Sci., X, p. 128 (1905).
Habitat—Philippine Islands.
"On cultivated tree with large oblong-ovate rough leaves."

Icerya colimensis Ckll.

Icerya colimensis Ckll., Mem. Soc. Cient. Ant. Alz., XIX, p. 81 (1902).
Habitat—Mexico.
On undetermined shrub.

Icerya littoralis tonilensis Ckll.

Icerya littoralis var. *tonilensis* Ckll., Mem. Soc. Cient. Ant. Alz., XIX, p. 80 (1902).
The Entom., XXXV, p. 318 (1902).
Habitat—Mexico.

Icerya rileyi larreæ Ckll.

Icerya rileyi var. *larreæ* Ckll., Mem. Soc. Cient. Ant. Alz., XIX, p. 82 (1902).
Habitat—Mexico.
On Larrea.

Subfamily **MARGARODINÆ.**

Ultracœlostoma, n. subg. of *Cœlostomidia;* Ckll., The Entom., XXXV, pp. 114, 258 (1902). Type, *assimilis.*

Xylococcus matumuræ Kuwana.

Xylococcus matumuræ Kuwana, Insect World, IX, 3, March (1905). Fig.

Subfamily **ORTHEZIINÆ.**

Polyocellaria[a] n. gen., Imhof, Biol. Centralblatt, XX, p. 527 (1900).
Kirkaldy, Can. Ent., XXXVIII, p. 10 (1906).

Arctorthezia, n. sect. of *Orthezia;* Ckll., The Entom., XXXV, pp. 114, 259 (1902). Type, *occidentalis.*

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[a] Described from Switzerland as a two-winged insect with hooked halteres, 10-jointed antennæ, 8 and 12 eyes and single-jointed tarsi. It is without much doubt a male Orthezia, but can not be an aphide, as considered by Kirkaldy.

Orthezia galapagoensis Kuwana.

Orthezia galapagoensis Kuwana. Jn. N. Y. Ent. Soc., x, p. 28 (1902). Fig.
Habitat—Galapagos Islands.
On *Cordea lutea; Scalesia microcephala.*

Orthezia olivacea Ckll.

Orthezia olivacea Ckll., Can. Ent., xxxvii, p. 136 (1905).
Habitat—Colorado.
In nests of *Lasius* sp. under rocks.

Orthezia solidaginis Sanders.

Orthezia solidaginis Sanders, Ohio Naturalist, iv, p. 94 (1904). Fig.
Pr. Ohio Ac. Sci., iv, sp. papers No. 8, Coccidæ of Ohio, p. 32 (1904). Fig.
Habitat—Ohio.
On *Solidago canadensis; Solidago* sp.

Subfamily **CONCHASPINÆ.**

Conchaspis fluminensis Hempel.

Conchaspis fluminensis Hemp., Bol. Agr. Sao Paulo, v, p. 312 (1904).
Habitat—Rio de Janeiro.
On an unknown shrub.

Subfamily **DACTYLOPIINÆ.**

Bambusaspis, n. sect. of *Asterolecanium;* Ckll., The Entom., xxxv, p. 114 (1902). Type, *miliaris.*

Asterolecanium greeni Marchal.

Asterolecanium greeni Marchal, Bul. Mus. d'Hist. Nat., vii, p. 455 (1904). Fig.
Habitat—France (in greenhouse); Ceylon.
On *Rheedia lateriflora.*

Asterolecanium pustulans sambuci Ckll.

Asterolecanium pustulans var. *sambuci* Ckll., The Entom., xxxvi, p. 112 (1903).
Habitat—Egypt.
On *Sambucus.*

Asterolecanium rehi Rübsaamen.

Asterolecanium rehi Rübs., Marcellia, i, p. 62 (1902).
Habitat—Madeira Islands.
On *Globularia salicina.*

Phenacobryum Ckll., The Entom., xxxv, p. 114 (1902).
Synonym of *Antecerococcus* Green (1900).

Eriococcus sordidus Green.

Eriococcus sordidus Green, Victorian Naturalist, xxi, p. 68 (1904). Fig.
Habitat—Australia.
On *Helichrysum ferrugineum.*

Eriococcus tricarinatus Fuller.

Eriococcus tricarinatus Fuller, Notes on Coccidæ W. Austr., p. 8 (1897).
Trans. Ent. Soc. Lond., p. 442 (1899). Fig.
Eriococcus simplex dealbata Fernald, Catalogue of Coccidæ, p. 78 (1903).
Habitat—Western Australia.
"On *Eucalyptus gomphocephala*, on galls of *Maskellia globosa* Fuller."

Genus **AMELOCOCCUS** Marchal. Type, *alluaudi*.

Amelococcus Marchal, Ann. Soc. Ent. France, LXXIII, p. 557 (1904).

Amelococcus alluaudi Marchal.

Amelococcus alluaudi Marchal, Ann. Soc. Ent. Fr., LXXIII, p. 557 (1904).
Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Madagascar.
On branches of *Euphorbia intisy*.

Sphærococcus pustulans Green.

Sphærococcus pustulans Green, Victorian Naturalist, XXII, p. 7 (1905). Fig.
Habitat—Australia.
On *Eucalyptus goniocalyx*.

Phenacoccus cockerelli King.

Phenacoccus cockerelli King, Can. Ent., XXXV, p. 195 (1903).
Habitat—Colorado.
On *Amelanchier*.

Phenacoccus kuwanæ Coleman.

Phenacoccus kuwanæ Coleman, Jn. N. Y. Ent. Soc., II, p. 62 (1903). Fig.
Habitat—California.
On lichen on *Picea breweriana*.

Phenacoccus ripersioides W. & T. Ckll.

Phenacoccus ripersioides W. & T. Ckll., Tr. Am. Ent. Soc., XXIX, p. 112 (1903).
Habitat—New Mexico.
With *Lasius niger* (8,000 feet altitude).

Genus **TRABUTINA** Marchal. Type, *elastica*.

Trabutina Marchal, Bul. Mus. d'Hist. Nat., VII, p. 448 (1904).

Trabutina elastica Marchal.

Trabutina elastica Marchal, Bul. Mus. d'Hist. Nat., VII, p. 448 (1904). Fig.
Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).
Habitat—Algeria.
On *Tamarix articulata*.

Trionymus hordei Lindeman.

Westwoodia hordei Lindeman, ——— ———.
Korbuly, Csanad: Banhegyes (Kaszaper) (1886).
Horvath, Magyar, K. A. Rov. A. Koz., Jelentes, (1) 8, p. 96 (1892).
Sajo, Zeitschr. f. Pflanzenkr., IV, p. 151 (1894).
Trionymus hordei Ckll., Ent. News, XV, p. 40 (1904).

Trionymus nanus Ckll.

Trionymus nanus Ckll., Can. Ent., XXXVII, p. 136 (1905).
Habitat—Colorado.
On roots of grass under stones.

Pseudococcus andersoni (Coleman).

Dactylopius andersoni Coleman, Jn. N. Y. Ent. Soc., XI, p. 62 (1903). Fig.
Habitat—California.
On *Cupressus goveniana; Libocedrus decurrens.*

Pseudococcus crotonis (Green).

Dactylopius crotonis Green (sine descr.), Tropic. Agric., XXIV, p. 44 (1905).
Habitat—Ceylon.
On *Castilloa* sp.

Pseudococcus dudleyi (Coleman).

Dactylopius dudleyi Coleman, Jn. N. Y. Ent. Soc., XI, p. 63 (1903). Fig.
Habitat—California.
On *Cupressus macnabiana.*

Pseudococcus elongatus (Reuter).

Dactylopius elongatus Reut., Medd. Soc. Faun. Fennicæ, 66, 251 (1903).

Pseudococcus ephedræ var., Ckll.

Pseudococcus ephedræ var., Ckll., Mem. Soc. Cient. Ant. Alz., XVII, p. 145 (1902).
Habitat—Mexico.
On agave.

Pseudococcus lilacinus Ckll.

Pseudococcus lilacinus Ckll., Pr. Dav. Ac. Sci., X, p. 128 (1905).
Habitat—Philippine Islands.
On cultivated orange.

Pseudococcus tayabanus Ckll.

Pseudococcus tayabanus Ckll., Pr. Dav. Ac. Sci., X, p. 129 (1905).
Habitat—Philippine Islands.
On cultivated cacao.

Pseudococcus vagabundus (Von Schilling).

Dactylopius vagabundus Von Schill., Allg. Zeits. f. Ent., VIII, p. 305 (1903).
Giard, Bul. Soc. Ent. France, pp. 232, 233 (1903).
Reh, Allg. Zeits. f. Ent., IX, p. 36 (1904).
"=a mixture of *Pulvinaria camellicola Phenacoccus aceris, P. æsculi,* and *P. mespili=pruni.*"—Giard.

Pseudococcus virgatus var., Ckll.

Pseudococcus virgatus (Ckll.) var., Pr. Dav. Ac. Sci., X, p. 128 (1905).
Habitat—Philippine Islands.
On cultivated Croton.

Antonina australis Green.

Antonina australis Green, Proc. Linn. Soc. N. S. W., pt. 3, p. 463 (1904). Fig.
Habitat—Australia.
On *Cyperus rotundatus.*

Subfamily **TACHARDIINÆ**

Tachardia albizziæ Green.

Tachardia albizziæ Green (sine descr.), Ind. Mus. Notes, v, p. 98 (1903).
Habitat—Ceylon.

Tachardia aurantiaca Ckll.

Tachardia aurantiaca Ckll., Can. Ent., xxxv, p. 65 (1903).
Habitat—Java.
On grape fruit (*Citrus*).

Tachardia cærulea Hempel.

Tachardia cærulea Hemp., Bol. Agr. Sao Paulo, v, p. 314 (1904).
Habitat—Rio de Janeiro.

Tachardia fici Green.

Tachardia fici Green, Ind. Mus. Notes, v, p. 97 (1903). Fig.
Habitat—India.
On *Ficus religiosa; F. bengalensis.*

Tachardia glomerella Ckll.

Tachardia glomerella Ckll., Ent. News, xvi, p. 52 (1905).
Habitat—New Mexico.
On *Gutierrezia glomerella.*

Subfamily **COCCINÆ.**

Pulvinaria coulteri Ckll.

Pulvinaria coulteri Ckll., Zool. Anzeiger, xxix, p. 514 (1905).
Habitat—Colorado.
On *Rosa* sp. (wild).

Pulvinaria goethei King.

Pulvinaria goethei King (sine descr.), Allg. Zeits. f. Ent., viii, p. 460 (1903).
Habitat—Germany.
On *Alnus glutinosa.*

Pulvinaria grabhami Ckll.

Pulvinaria grabhami Ckll., The Entom., xxxvi, p. 261 (1903).
Habitat—Madeira.
On leaves of *Jossinia tinifolia*, attended by *Iridomyrmex humilis.*

Pulvinaria innumerabilis betheli King.

Pulvinaria innumerabilis var. *betheli* King, Can. Ent., xxxv, p. 195 (1903).
Habitat—Colorado.
On *Alnus.*

Pulvinaria maxima Green.

Pulvinaria maxima Green, Ent. Mo. Mag., xl, p. 206 (1904). Fig.
Habitat—Java.
On stems of *Erythrina lithosperma.*

Pulvinaria polygonata Ckll.

Pulvinaria polygonata Ckll., Pr. Dav. Ac. Sci., x, p. 131 (1905).
Habitat—Philippine Islands.
"On a cultivated shade tree."

Pulvinaria psidii philippina Ckll.

Pulvinaria psidii philippina Ckll., Pr. Dav. Ac. Sci., x, p. 132 (1905).
Habitat—Philippine Islands.
On a cultivated *Ficus*.

Pulvinaria rehi King.

Pulvinaria rehi King (sine descr.), Allg. Zeits. f. Ent., VIII, p. 460 (1903).
Habitat—Germany.

Pulvinaria tyleri Ckll.

Pulvinaria tyleri Ckll., Pr. Dav. Ac. Sci., x, p. 132 (1905).
Habitat—Philippine Islands.
On "cadena de amor."

Pulvinaria vitis opacus King.

Pulvinaria vitis var. *opacus* King (sine descr.), Allg. Zeits. f. Ent., VIII, p. 461 (1903).
Habitat—Germany.

Pulvinaria vitis sorbusæ King.

Pulvinaria vitis var. *sorbusæ* King (sine descr.), Allg. Zeits. f. Ent., VIII, p. 461 (1903).
Habitat—Germany.

Pulvinaria vitis verrucosæ King.

Pulvinaria vitis var. *verrucosæ* King (sine descr.), Allg. Zeits. f. Ent., VIII, p. 461 (1903).
Habitat—Germany.

Eriopeltis coloradensis Ckll.

Eriopeltis coloradensis Ckll., Can. Ent., XXXVII, p. 136 (1905).
Habitat—Colorado.
On stems of grass.

Ceroplastes sanguineus Ckll.

Ceroplastes sanguineus Ckll., Ent. News., XVI, p. 162 (1905).
Habitat—Paraguay.
On *Maytenus* sp.

Ceroplastes schrottkyi Ckll.

Ceroplastes schrottkyi Ckll., Ent. News, XVI, p. 162 (1905).
Habitat—Paraguay.
On *Salix chilensis*.

Ctenochiton serratus Green.

Ctenochiton serratus Green, Victorian Nat., XXI, p. 67 (1904). Fig.
Habitat—Australia.
On *Styphelia* sp.

Eucalymnatus subtessellatus (Green).

Lecanium subtessellatum Green, Cocc. Ceylon, pt. III, p. 206 (1904). Fig.
Habitat—Ceylon.
On leaves of undetermined tree.

Genus **STICTOCOCCUS** Ckll. Type, *sjostedti*.

Stictococcus T. D. A. Ckll., Can. Ent., XXXV, p. 64 (1903).

Stictococcus sjostedti T. & W. Ckll.

Stictococcus sjostedti T. & W. Ckll., Can. Ent., xxxv, p. 64 (1903).
Habitat—Cameroons, Western Africa.

Coccus arundinariæ (Green).

Lecanium arundinariæ Green, Cocc. Ceylon, pt. III, p. 220 (1904). Fig.
Habitat—Ceylon.
On *Arundinaria* sp.

Coccus bicruciatus (Green).

Lecanium bicruciatum Green, Cocc. Ceylon, pt. III, p. 214 (1904). Fig.
Habitat—Ceylon.
On *Memecyclon umbellatum; Nothopegia colebrookiana; Eleagnus latifolia; Calophyllum* sp.; *Eugenia* sp.

Coccus capparidis (Green).

Lecanium capparidis Green, Cocc. Ceylon, pt. III, p. 187 (1904). Fig.
Habitat—Ceylon.
On *Capparis moonii.*

Coccus diversipes Ckll.

Coccus diversipes Ckll., Pr. Dav. Ac. Sci. x, p. 130 (1905).
Habitat—Philippine Islands.
"On cultivated fern 'parasite.'"

Coccus frontalis (Green).

Lecanium frontale Green, Cocc. Ceylon, pt. III, p. 192 (1904). Fig.
Habitat—Ceylon.
On leaves of "kina" (*Calophyllum* sp.).

Coccus incisus King.

Calymnatus incisus King, Rev. Chil. Hist. Nat., VI, p. 255 (1902).
Habitat—South America.
On nutmeg.

Coccus marsupialis (Green).

Lecanium marsupiale Green, Cocc. of Ceylon, pt. III, p. 212 (1904). Fig.
Habitat—Ceylon.
On *Piper nigrum; Pothos scandens; Anona* sp.

Coccus signiferus (Green).

Lecanium signiferum Green, Cocc. of Ceylon, pt. III, p. 197 (1904). Fig.
Habitat—Ceylon.
On *Caryota urens; Alpinia nutans; Begonia* sp. (cult.).

Mesolecanium inflatum Hempel.

Mesolecanium inflatum Hemp., Bol. Agr. Sao Paulo, V, p. 316 (1904).
Habitat—Rio de Janeiro.
On Myrtaceæ.

Eulecanium curtisi Kirkaldy. (Not valid.)

Eulecanium curtisi Kirkaldy, The Entom., XXXVII, p. 257 (1904).

Eulecanium folsomi Ckll.

Eulecanium folsomi Ckll., Can. Ent., xxxv, p. 193 (1903).
Proc. Ent. Soc. Wash., vii, p. 129 (1905).

Habitat—Illinois.
On Paw-paw (*Asimina triloba*).

Eulecanium lüstneri (King).

Lecanium lüstneri King, Allg. Zeits. f. Ent., viii, p. 409 (1903) (sine descr.).

Eulecanium pulchrum (King).

Lecanium pulchrum King, Allg. Zeits. f. Ent., viii, p. 410 (1903) (sine descr.).

Paralecanium calophylli (Green).

Lecanium (*Paralecanium*) *calophylli* Green, Cocc. Ceylon, pt. iii, p. 240 (1904). Fig

Habitat—Ceylon.
On *Calophyllum* sp.

Paralecanium expansum javanicum (Green).

Lecanium expansum var. *javanicum* Green, Ent. Mo. Mag., xl, p. 205 (1904).

Habitat—Java.
On *Anomianthus heterocarpus*.

Paralecanium expansum metallicum (Green).

Lecanium expansum var. *metallicum* Green, Ent. Mo. Mag., xl, p. 205 (1904).
Ann. Mag. Nat. Hist., (7), xiv, p. 377 (1904).

Habitat—Java; Malay Peninsula.
On *Myristica fragrans*.

Paralecanium expansum quadratum (Green).

Lecanium expansum var. *quadratum* Green, Cocc. of Ceylon, pt. iii, p. 236 (1904). Fig.

Habitat—Ceylon.
On cultivated nutmeg; undetermined tree.

Paralecanium expansum rotundum (Green).

Lecanium expansum var. *rotundum* Green, Ent. Mo. Mag., xl, p. 206 (1904).

Habitat—Java.
On *Rhizophora mucronata*.

Paralecanium peradeniyense (Green).

Lecanium (*Paralecanium*) *peradeniyense* Green, Cocc. Ceylon, pt. iii, p. 241 (1904). Fig.

Habitat—Ceylon.
On *Piper nigrum* (cult.).

Paralecanium zonatum (Green).

Lecanium (*Paralecanium*) *zonatum* Green, Cocc. Ceylon, pt. iii, p. 245 (1904). Fig.

Habitat—Ceylon.
On *Garcinia spicata*.

Saissetia discrepans (Green).

Lecanium discrepans Green, Cocc. Ceylon, pt. iii, p. 204 (1904). Fig.

Habitat—Ceylon.
On tea plant, in nest of *Cremastogaster dohrni* or exposed.

Saissetia psidii (Green).

Lecanium psidii Green, Coce. Ceylon, pt. III, p. 225 (1904). Fig.
Habitat—Ceylon.
On *Psidium guava; Mangifera indica; Artocarpus integrifolia; Eugenia* sp.; *Fagræa; Myristica moschata.* Often inclosed in nests of *Œcophylla smaragdina.*

Saissetia punctulifera (Green).

Lecanium punctuliferum Green, Coce. Ceylon, pt. III, p. 205 (1904). Fig.
Habitat—Ceylon.
On *Michelia champaca; Æma lanata.*

Physokermes concolor Coleman.

Physokermes concolor Coleman, Jn. N. Y. Ent. Soc., XI, pp. 72, 77 (1903).
Habitat—California.
On *Abies concolor.*

Physokermes taxifoliæ Coleman.

Physokermes taxifoliæ Coleman, Jn. N. Y. Ent. Soc., XI, pp. 73, 77 (1903).
Habitat—California.
On *Pseudotsuga taxifolia.*

"Lecanium" insolens King.

Lecanium insolens King, Rev. Chil. Hist. Nat., VI, p. 255 (1902).
Habitat—Brazil.
On *Philodendron.*

"Lecanium" limnanthemi Goury.[a]

Lecanium limnanthemi Goury, Feuille des Jeunes Nat., Feb., p. 62 (1905).
Habitat—France.
On submerged petiole of *Limnanthemum nymphoides.*

"Lecanium" tenebricophilum Green.

Lecanium tenebricophilum Green, Ent. Mo. Mag., XL, p. 204 (1904). Fig.
Habitat—Java.
Within tunnels in branches of *Erythrina lithosperma.*

Subfamily **DIASPINÆ.**

Chionaspis angustata Green.

Chionaspis angustata Green, Victorian Nat., XXI, p. 67 (1904). Fig.
Habitat—Australia.
On *Leptospermum lævigatum.*

Chionaspis candida Green.

Chionaspis candida Green, Victorian Nat., XXII, p. 6 (1905). Fig.
Habitat—Australia.
On *Callistemon salignus.*

Chionaspis cinnamomi Green.

Chionaspis cinnamomi Green, Jn. Bomb. N. H. Soc., XVI, p. 354 (1905). Fig.
Habitat—Ceylon.
On leaves of *Cinnamomum.*

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[a] No description was given. It is very improbable that it is a Coccid.

Chionaspis coronifera Green.

Chionaspis coronifera Green, Jn. Bomb. N. H. Soc., XVI, p. 353 (1905). Fig.
Habitat—Ceylon.
On undetermined tree.

Chionaspis decurvata Green.

Chionaspis decurvata Green, Ind. Mus. Notes, V, p. 63 (1903). Fig.
Habitat—India.
On rice (*Oryza sativa*).

Chionaspis formosa Green.

Chionaspis formosa Green, Pr. Linn. Soc. N. S. W., pt. III, p. 462 (1904). Fig.
Habitat—Australia.
On leaves of *Eucalyptus tereticornis.*

Chionaspis gleditsiæ Sanders.

Chionaspis gleditsiæ Sanders, Ohio Naturalist, III, p. 413 (1902). Fig.
Pr. Ohio Ac. Sci., IV, sp. papers No. 8, p. 46 (1904). Fig.
Habitat—Ohio, Pennsylvania, West Virginia, Maryland, Virginia, District of Columbia.
On *Gleditsia triacanthos.*

Chionaspis ortholobis bruneri Ckll.

Chionaspis ortholobis bruneri Ckll., Can. Ent., XXX, p. 133 (1898).
A synonym of *Chionaspis salicis-nigræ* (Walsh).

Chionaspis subcorticalis Green.

Chionaspis subcorticalis Green, Jn. Bomb. N. H. Soc., XVI, p. 351 (1905). Fig.
Habitat—Ceylon.
Under loose bark of *Artocarpus integrifolia.*

Chionaspis sylvatica Sanders.

Chionaspis sylvatica Sanders, Ohio Naturalist, IV, p. 95 (1904). Fig.
Pr. Ohio Ac. Sci., IV, sp. papers No. 8, p. 46 (1904). Fig.
Habitat—Ohio, Pennsylvania, West Virginia, Maryland, Virginia, District of Columbia.
On *Nyssa sylvatica.*

Howardia lobulata Del Guercio.

Howardia lobulata Del Guercio, Bul. Ent. Soc. Ital., XXXIV, pp. 179, 185 (1902).
Leonardi, Ann. R. Scuola Sup. Agr. Portici, V, pp. 1–5 (1903).
Synonym of *Rhopaloaspis riccæ* (Targ.).

Diaspis cordiæ Rübsaamen.

Diaspis cordiæ Rübs., Marcellia, IV, 5, p. 122 (1905).
Habitat—Rio de Janeiro.
On *Cordia curassavica.*

Diaspis squamosus Newst. & Theobald.

Diaspis squamosus Newst. & Theob., 2d Rep. Ec. Ent. Br. Mus., p. 185 (1904). Fig.
Habitat—Egypt.
On peach and pear.

Phenacaspis bupleuri (Marchal).

Chionaspis (*Phenacaspis*) *bupleuri* Marchal, Bul. Mus. d'Hist. Nat., VII, p. 454 (1904).
Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Algeria.
On *Bupleurum gibraltaricum.*

Phenacaspis ceratoniæ (Marchal).

Chionaspis (*Phenacaspis*) *ceratoniæ* Marchal, Bul. Mus. d'Hist. Nat. VII, p. 452 (1904). Fig.
Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Algeria.
On *Ceratonia siliqua.*

Phenacaspis strobilanthi (Green).

Chionaspis strobilanthi Green, Jn. Bomb. N. H. Soc., XVI, p. 352 (1905). Fig.
Habitat—Ceylon.
On *Strobilanthus* sp.

Hemichionaspis theæ ceylonica (Green).

Chionaspis theæ var. *ceylonica* Green, Jn. Bomb. N. H. Soc., XVI, p. 354 (1905). Fig.
Habitat—Ceylon.

Hemichionaspis townsendi Ckll.

Hemichionaspis townsendi Ckll., Pr. Dav. Ac. Sci., X, p. 135 (1905).
Habitat—Philippine Islands.
On bark of *Gossypium* sp.

Leucaspis corsa Lindinger.

Leucaspis (*Eulcucaspis*) *corsa* Lind., Zool. Anzeiger, XXIX, 8, p. 252 (1904).
Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Corsica.
On *Pinus laricio.*

Leucaspis cupressi Coleman.

Leucaspis cupressi Coleman, Jn. N. Y. Ent. Soc., XI, p. 71 (1903). Fig.
Habitat—California.
On *Cupressus goveniana.*

Leucaspis kelloggi Coleman.

Leucaspis kelloggi Coleman, Jn. N. Y. Ent. Soc., XI, p. 68 (1903). Fig.
Habitat—California.
On *Pseudotsuga taxifolia; Abies magnifica; A. grandis; A. concolor; A. shastensis.*

Leucaspis kermanensis Lindinger.

Leucaspis (*Salicicola*) *kermanensis* Lind., Zool. Anz., XXIX, 8, p. 253 (1904).
Speiser, Zeits. f. wiss. Insekt., I, 12, p. 520 (1905).

Habitat—Corsica.
On *Salix persica; S. zygostemon; Populus euphratica.*

Leucaspis leonardi Ckll.

Leucaspis pini Berl. & Leon., Cherm. Ital., Fasc. I, No. 19 (1895).
Leucaspis leonardi Ckll., Jn. N. Y. Ent. Soc., XI, p. 84 (1903).
Habitat—Italy.
On *Pinus picea.*

Fiorinia bidens Green.

Fiorinia bidens Green, Jn. Bomb. N. H. Soc., XVI, p. 351 (1905). Fig.
Habitat—Ceylon.
"On leaves of undetermined tree."

Genus **RHOPALOASPIS** Del Guercio. Type, *riccæ*.

Rhopaloaspis Del Guercio, Bul. Soc. Ent. Ital., XXXIV, pp. 185–188 (1902).

Rhopaloaspis riccæ (Targ.) = *Leucaspis riccæ* Targ.

Aspidiotus californicus Coleman.

Aspidiotus californicus Coleman, Jn. N. Y. Ent. Soc., XI, p. 64 (1903). Fig.
Habitat—California.
On *Pinus sabiniana; P. ponderosa; P. lambertiana; P. attenuata.*

Aspidiotus capensis Walker.

Aspidiotus capensis Green, Ann. Mag. Nat. Hist. (7), XIV, p. 375 (1904). Fig.
Habitat—Cape Colony.
On undetermined plant.
This species, which is in the British Museum, has been redescribed and restored to science by Mr. E. E. Green.

Aspidiotus capsulatus Green.

Aspidiotus capsulatus Green (sine descr.), Jn. Bomb. N. H. Soc., XVI, p. 343 (1905).
Habitat—Java.
On *Piper nigrum.*

Aspidiotus coniferarum shastæ Coleman.

Aspidiotus coniferarum var. *shastæ* Coleman, Jn. N. Y. Ent. Soc., XI, p. 67 (1903). Fig.
Habitat—California.
On *Cupressus macnabiana.*

Aspidiotus cuculus Green.

Aspidiotus cuculus Green, Jn. Bomb. N. H. Soc., XVI, p. 341 (1905). Fig.
Habitat—Ceylon.
In abandoned galls of *Amorphococcus mesuæ* Green.

Aspidiotus ehrhorni Coleman.

Aspidiotus (*Diaspidiotus*) *ehrhorni* Coleman, Jn. N. Y. Ent. Soc., XI, p. 68 (1903). Fig.
Habitat—California.
Under lichens on *Abies concolor; Libocedrus decurrens.*

Aspidiotus florenciæ Coleman.

Aspidiotus florenciæ Coleman, Jn. N. Y. Ent. Soc., XI, p. 66 (1903). Fig
Habitat—California.
On *Pinus ponderosa.*

Aspidiotus immaculatus Green.

Aspidiotus (*Hemiberlesia*) *immaculatus* Green, Victorian Nat., XXI, p. 65 (1904). Fig.
Habitat—Australia.
On *Styphelia virgata.*

Aspidiotus moreirai Hempel.

Aspidiotus moreirai Hemp., Bol. Agr. São Paulo, v, p. 320 (1904).
Habitat—Rio de Janeiro.
On leaves of *Drymus* sp.

Aspidiotus ohioensis York.

Aspidiotus (*Diaspidiotus*) *ohioensis* York, Ohio Naturalist, v, p. 325 (1905). Fig.
Habitat—Ohio.
On *Æsculus glabra*.

Aspidiotus oxycoccus Woglum.

Aspidiotus oxycoccus Woglum, Can Ent., xxxviii, p. 73 (1906). Fig.
Habitat—New Jersey.
On Cranberry (*Oxycoccus*).

Aspidiotus piceus Sanders.

Aspidiotus piceus Sanders, Ohio Naturalist, iv, p. 96 (1904). Fig.
Pr. Ohio Ac. Sci., iv, sp. papers No. 8, p. 66 (1904). Fig.
Habitat—Ohio.
On *Liriodendron tulipifera*.

Aspidiotus pisai Hempel.

Aspidiotus pisai Hemp., Bol. Agr. São Paulo, v, p. 320 (1904).
Habitat—Rio de Janeiro.
On leaves of *Drymus* sp.

Aspidiotus pseudospinosus Woglum.

Aspidiotus pseudospinosus Woglum, Can. Ent., xxxviii, p. 75 (1906). Fig.
Habitat—Florida.
On saw-palmetto.

Aspidiotus pustulans Green.

Aspidiotus pustulans Green, Ent. Mo. Mag., xli, p. 31 (1905). Fig.
Habitat—Java.
On *Erythrina lithosperma*.

Aspidiotus riveræ Ckll.

Aspidiotus riveræ Ckll., Ent. News, xvi, p. 161 (1904).
Habitat—Chile.
On stems of *Chusquea*.

Aspidiotus subfervens Green.

Aspidiotus (*Targionia*) *subfervens* Green, Victorian Nat., xxi, p. 66 (1904). Fig.
Habitat—Australia.
On *Acacia* sp.; *Pomaderris* sp.

Aspidiotus subrubescens corticoides Green.

Aspidiotus (*Evaspidiotus*) *subrubescens* var. *corticoides* Green, Victorian Nat., xxii, p. 3, (1905). Fig.
Habitat—Australia.
On *Eucalyptus globosus*.

Aspidiotus tayabanus Ckll.

Aspidiotus tayabanus Ckll., Pr. Dav. Ac. Sci., x, p. 133 (1905).
Habitat—Philippine Islands.
"On cultivated plant called 'rosal' or 'campopot.'"

Cryptophyllaspis bornmülleri Rübsaamen.

Cryptophyllaspis bornmülleri Rübs., Marcellia, I, fasc. i-ii, p, 62 (1902).
Habitat—Canary Islands; Madeira.
On *Globularia salicina.*

Cryptophyllaspis occultus elongatus (Green).

Aspidiotus (*Cryptophyllaspis*) *occultus* var. *elongatus* Green, Jn. Bomb. N. H. Soc., XVI, p. 345 (1905). Fig.
Habitat—Ceylon.
On leaves of *Grewia* sp.

Pseudaonidia curculiginis (Green).

Aspidiotus (*Pseudaonidia*) *curculiginis* Green, Ent. Mo. Mag., XL, p. 208 (1904). Fig.
Habitat—Java.
On leaves of *Curculigo recurvata.*

Chrysomphalus cistuloides (Green).

Aspidiotus (*Chrysomphalus*) *cistuloides* Green, Jn. Bomb. N. H. Soc., XVI, p. 342 (1905). Fig.
Habitat—Ceylon.
On leaves of *Cinnamomum.*

Chrysomphalus malleolus (Green).

Aspidiotus (*Chrysomphalus*) *malleolus* Green, Jn. Bomb. N. H. Soc., XVI, p. 342 (1905). Fig.
Habitat—Ceylon.
On leaves of *Mimusops hexandra.*

Chrysomphalus pedronis (Green).

Aspidiotus (*Chrysomphalus*) *pedronis* Green, Jn. Bomb. N. H. Soc., XVI, p. 341 (1905). Fig.
Habitat—Ceylon.
"On leaves of undetermined tree."

Chrysomphalus quadriclavatus (Green).

Aspidiotus (*Chrysomphalus*) *quadriclavatus* Green, Jn. Bomb. N. H. Soc., XVI, p. 343 (1905). Fig.
Habitat—Ceylon.
On leaves of *Murraya exotica.*

Chrysomphalus taprobanus (Green).

Aspidiotus (*Aonidiella*) *taprobanus* Green, Jn. Bomb. N. H. Soc., XVI, p. 344 (1905). Fig.
Habitat—Ceylon.
On leaves of *Phyllanthus myrtifolius.*

Targionia phyllanthi (Green).

Aspidiotus (*Targionia*) *phyllanthi* Green, Jn. Bomb. N. H. Soc., XVI, p. 344 (1905). Fig.
Habitat—Ceylon.
On stems and twigs of *Phyllanthus myrtifolius.*

Odonaspis penicillata Green.

Odonaspis penicillata Green, Jn. Bomb. N. H. Soc., XVI, p. 346 (1905). Fig.
Habitat—Ceylon.
On a large bamboo (*Gigantochloa aspera*).

Aonidia ebeni "Green" Leonardi=*Aonidia crenulata* Green. Green in litt., July 6, 1905.

Aonidia echinata Green.

Aonidia echinata Green, Jn. Bomb. N. H. Soc., XVI, p. 347 (1905). Fig.
Habitat—Ceylon.
On *Hemicyclia sepiaria.*

Aonidia javanensis Green.

Aonidia javanensis Green, Ent. Mo. Mag., XLI, p. 31 (1905). Fig.
Habitat—Java.
On leaves of *Myristica fragrans.*

Aonidia pulchra Green.

Aonidia (*Greeniella*) *pulchra* Green, Victorian Nat., XXII, p. 4 (1905). Fig.
Habitat—Australia.
On leaves of *Callistemon salignus.*

Aonidia pusilla Green.

Aonidia pusilla Green, Jn. Bomb. N. H. Soc., XVI, p. 347 (1905). Fig.
Habitat—Ceylon.
On leaves of *Carissa spinarum.*

Gymnaspis spinomarginata Green.

Gymnaspis spinomarginata Green, Jn. Bomb. N. H. Soc., XVI, p. 348 (1905). Fig.
Habitat—Ceylon.
On leaves of *Mesua ferrea.*

Genus **MYTILELLA** Leonardi. Type, *carinata.*

Mytilella Leonardi, Annali di Agr., V, p. 120 (1903).

Genus **AONIDOMYTILUS** Leonardi. Type, *concolor.*

Aonidomytilus Leonardi, Annali di Agr., V, p. 102 (1903).

Genus **FERNALDIELLA** Leonardi. Type, *indentata.*

Fernaldiella Leonardi, Annali di Agr., V, p. 105 (1903).

Lepidosaphes cockerelliana Kirkaldy. (Not valid.)

Lepidosaphes cockerelliana Kldy., The Entom., XXXVII, p. 257 (1904).
Synonym of *L. alba* Ckll.

Lepidosaphes bicornis (Green & Lidg.).

Mytilaspis bicornis Green & Lidg., Victorian Nat., xvii, p. 9 (1900). Fig.
Leonardi, Annali di Agr., v, p. 85 (1903). Fig.
Habitat—Victoria, Australia.
On *Eucalyptus globulus.*

Lepidosaphes cassiniæ Green.

Mytilaspis cassiniæ Green, Victorian Nat., xxii, p. 4 (1905). Fig.
Habitat—Victoria, Australia.
On *Cassinia aculeata.*

Lepidosaphes corrugata Green.

Lepidosaphes corrugata Green, Ent. Mo. Mag., xl, p. 209 (1904).
Habitat—Java.
On stems of *Coffea arabica.*

Lepidosaphes ficifolii (Berlese).

Mytilaspis ficifolii Berlese, Atti del R. Inst. d'Incorrag. (5), v (1903). Fig.
Habitat—Italy.
On leaves of *Ficus carica.*

Lepidosaphes hymenantheræ (Green).

Mytilaspis (*Coccomytilus*) *hymenantheræ* Green, Victorian Nat., xxii, p. 5 (1905). Fig.
Habitat—Victoria, Australia.
On *Hymenanthera banksii.*

Lepidosaphes intermedia victoriæ (Green).

Mytilaspis intermedia var. *victoriæ* Green, Victorian Nat., xxii, p. 5 (1905).
Habitat—Victoria, Australia.
On *Acacia montana.*

Lepidosaphes multipora (Leonardi).

Mytilaspis multipora Leon., Annali di Agr., v, p. 87(1903). Fig.
Green, Victorian Nat., xxii, p. 6 (1903).
Habitat—New Zealand.
On *Pittosporum undulatum.*

Lepidosaphes rubrovittatus Ckll.

Lepidosaphes rubrovittatus Ckll., Pr. Dav. Ac. Sci., x, p. 135 (1905).
Habitat—Philippine Islands.
On cultivated *Eugenia malaccensis.*

Lepidosaphes ungulata Green.

Lepidosaphes ungulata Green, Ent. Mo. Mag., xli, p. 30 (1905). Fig.
Habitat—Java.
On *Syzygium pseudo-jambolanum.*

Lepidosaphes wilga (Green).

Mytilaspis wilga "Green" Leonardi, Annali di Agr., v, p. 43 (1903). Fig.
Habitat—Australia.
On "*Wilga.*"

Opuntiaspis javanensis Green.

Opuntiaspis javanensis Green, Ent. Mo. Mag., XLI, p. 28 (1905). Fig.
Habitat—Java.
On *Agave mexicana*.

Euparlatoria Leonardi, Ann. R. Sc. Sup. di Agr. Portici, v, p. 15 (1903).
To include *banksiæ*, *calianthina*, *cingala*, *myrtus*, *parlatoriæ*, *pergandii*, *proteus*, and *theæ*.

Parlatoria atalantiæ Green.

Parlatoria (*Websteriella*) *atalantiæ* Green, Jn. Bomb. N. H. Soc., XVI, p. 350 (1905). Fig.
Habitat—Ceylon.
On leaves of *Atalantia zeylanica*.

Parlatoria pergandii phyllanthi Green.

Parlatoria pergandii var. *phyllanthi* Green, Jn. Bomb. N. H. Soc., XVI, p. 350 (1905). Fig.
Habitat—Ceylon.
On leaves of *Phyllanthus myrtifolius*.

Parlatoria pseudaspidiotus Lindinger.

Parlatoria pseudaspidiotus Lindgr., Insekten Börse, XXII, 33, p. 131 (1905).
Habitat—India.
On orchids (*Vanda hookeriana* and *V. teres*).

Genus **CRYPTOPARLATOREA** Lindinger. Type, *leucaspis*.

Cryptoparlatorea Lindgr., Insekten Börse, XXII, 33, p. 132 (1905).

Cryptoparlatorea leucaspis Lindinger.

Cryptoparlatorea leucaspis Lindgr., Insekten Börse, XXII, 33, p. 132 (1905).
Habitat—Japan.
On needles of *Juniperus* sp.

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